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09/807,086

06/26/2001

Richard C. Boyd

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7590

05/04/2004

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EXAMINER

DUONG, THO V

ART UNIT

PAPER NUMBER

3743

DATE MAILED: 05/04/2004

12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/807,086

Applicant(s)

BOYD ET AL.

Examiner

Tho v Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-17 is/are allowed.
- 6) ☒ Claim(s) 7-13 and 15 is/are rejected.
- 7) ☒ Claim(s) 14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 12/5/2003 have been fully considered but they are not persuasive. The examiner agrees with the applicant that Gajewski reference discloses that the engine cooling fluid may flow to any other part of the cooling system upon leaving the discharge passage. The applicant argues that the combination of references only disclose that the cooling fluid flows to the EGR valve section after the cooling fluid exits at the discharge outlet of the alternator. Therefore, the combination fails to disclose an EGR valve connected between the inlet and outlet passage of the alternator. In response to applicant's arguments, the examiner wants to emphasis that the inlet and outlet of the conduit member is not defined as the inlet and the outlet passage of the alternator as claimed. The inlet of the conduit member may be defined as the inlet passage of the alternator and the outlet of the conduit may be defined as the outlet of the outlet passage of the EGR valve section. The combination of references suggest that a conduit member which conducts cooling fluid from the inlet passage of the alternator to the exit passage (22) of the EGR valve section. Therefore, both the alternator and the EGR valve section are mounted between the inlet passage of the alternator and the outlet passage of the EGR valve section.

Furthermore, applicant's arguments that if the teachings of the Tanaka reference are combined with the Gajewski reference, the EGR valve in the Tanaka reference and the alternator in the Gajewski reference would be interconnected by a coolant hose, not mounted with a common conduit member that defines a coolant passage. In response to applicant's

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argument that the hose will be used to connect the EGR valve and the alternator, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Even with the applicant's bodily incorporation of the two references, the hose that connects the EGR and the alternator is still considered to read on the common conduit member since "conduit" has been defined as a natural or artificial channel through which some thing as fluid is conveyed. (Merriam Webster's Collegiate Dictionary 10th Edition).

At last, applicant's argument that the coolant passage in the Tanaka reference is not in heat transmitting relation with the EGR valve, has been very carefully considered but is not deemed to be persuasive. One of ordinary skill in the heat exchanger art would know that heat exchanging can be taken place by radiation, convection and conduction which means by direct contact. Tanaka discloses (figures 3-6 and column 2, lines 46-68) that the body (13) of the EGR valve (12) is in direct contact with stud bolts (17) which is capable of conducting heat between them; the stud bolts which in turn is in direct contact with the flange (7) which is also capable of conducting heat between them; the flange (7) which in turn is in direct contact with the cooling flow passage (11). Therefore, the EGR valve is in heat transmitting relation to the cooling passage.

Claim Objections

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Claim 14 is objected to because of the following informalities: applicant is advised to change the method limitation of "mounting a coolant temperature sensor extending into the coolant passage" into a positive structural limitation such as "and a coolant temperature sensor (18) mounted to said crossover and extending into the cooling passage" since the claim is an apparatus claim. Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gajewski et al. (US 5,040,493) in view of Tanaka et al. (US 4,938,176). Gajewski discloses (figures 1-2 and column 3, lines 45-63) an external coolant conduit member integrated as a part of an intake manifold (28) forming a connection between V-type engine components (10); the coolant conduit member comprising a body (body of the intake manifold) mountable to the engine (10) and defining a cooling passage (34,36,38,40) extending between an inlet (36) and an outlet (40) in the body; a first mount includes an inner wall (32) defining a cavity (34) and mounted means (21) for mounting an alternator (16) in the cavity to transmit heat into the cooling passage; the inner wall (32) surrounding the alternator (16) so as to form an outer wall for the alternator (16) when the alternator is placed inside the cavity (34). As regarding claim 10, the outside wall of the alternator is considered to read on the inner wall of the conduit since the

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outside wall of the alternator defines an inner boundary of the conduit member and form with the wall (32) a cooling passage. Gajewski further discloses (figure 2) that cooling ribs (26) extending from the inner wall into the coolant passage. Gajewski does not disclose that an EGR valve is mounted in the conduit member. Gajewski has further suggested (column 4, lines 13-26) that upon leaving the discharge passage (40), the coolant may flow to any other appropriate part of the cooling system of the engine. Tanaka discloses that one of the cooling system of the engine is a cooling of an EGR valve. Tanaka discloses (figures 1-6, and column 2, lines 17-46) that an EGR (12) is mounted to a cooling conduit member (5), which is integrally formed with an intake manifold (1) by a flange (7) and wherein the cooling conduit member (5) has a cooling passage (11) extending in heat exchange relation to the EGR valve (12) to partially cool the EGR valve and to prevent the loosening of the EGR from the intake manifold due to the high temperature of the exhaust gas. The EGR valve (12) is capable of controlling the exhaust gas flowing through a passage (6) between inlet and outlet ports in the conduit member (5). As suggested by Gajewski, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use Tanaka's teaching in Gajewski's intake manifold system to partially cool the EGR valve attached to the intake manifold and to prevent the loosening of the EGR valve from the intake manifold.

Allowable Subject Matter

Claims 16-17 are allowed.

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Claim 14 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and the correction in view of the above objection.

The following is a statement of reasons for the indication of allowable subject matter: the prior art either taken singularly or in combination fail to disclose that the crossover also defines a thermostat housing in the coolant passage.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Tho Duong whose telephone number is (703) 305-0768. The examiner can normally be reached on from 9:30-6 PM.

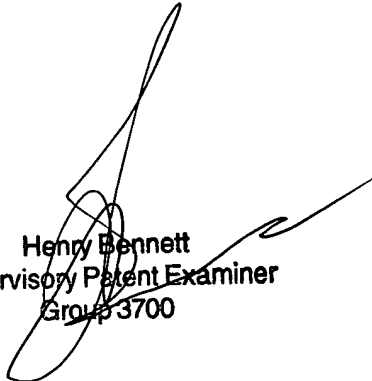
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Henry Bennet, can be reached on (703) 308-0101. The fax-phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.

Tho Duong

May 3, 2004



Henry Bennett
Supervisory Patent Examiner
Group 3700